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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,279	11/19/2003	Clifton E. Scott	020296	9985

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QUALCOMM, INC
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EXAMINER

DARE, RYAN A

ART UNIT PAPER NUMBER

2186

DATE MAILED: 11/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/718,279		SCOTT ET AL.	
	Examiner		Art Unit	
	Ryan Dare		2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/19/03.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06/21/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 6-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen, US PG Pub 2002/0169923, in view of Applicant's admitted prior art.

4. With respect to claim 6, Chen teaches a wireless communication device, comprising:

at least one processor, in fig. 3, Processor 112;

at least one RAM communicating with the processor, in fig. 3, memory 124 and

the last three lines of par. 5.

at least one flash driver controlling operation of the flash memory device, the flash driver being executable from the RAM, in par. 16.

Chen teaches a flash memory device communicating with the processor, in fig. 3, Flash memory 126, but fails to teach that it is a read-while-write flash memory.

Applicant's background admits that a read-while-write flash memory can be used in a wireless communication device.

5. It would have been obvious to one of ordinary skill in the art to modify the flash memory system of Chen to use read-while-write flash memory to achieve greater system robustness, as taught by Applicant in par. 3.

6. With respect to claim 7, Chen teaches the device of claim 6, wherein the flash driver is prevented from accessing code in a code bank of the flash memory device at least when performing operations on the flash memory device, in par. 16, where it is disclosed that the needed parts of the system program are loaded into volatile memory to prevent access to the flash memory device.

7. With respect to claim 8, Chen teaches the wireless communication device of claim 6, wherein the flash driver is executed by the processor, in par. 6.

8. With respect to claims 9 and 14, Chen fails to teach that the flash driver is executed to download at least one game into the wireless communications device. However, it is widely known in the art that a wireless communication device such as a wireless phone is able to download a game, as taught by Applicant in the last sentence of par. 3.

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9. It would have been obvious to one of ordinary skill in the art to implement the flash memory device of Chen on a wireless phone that allows a user to download a game, as taught by Applicant's own prior art admission, as is it is a common feature in the art.

10. With respect to claim 10, Chen teaches the wireless communication device of claim 6, wherein one and only one copy of the flash driver exists in the wireless communication device, and that in the RAM, in the last sentence of par. 4.

11. With respect to claim 11, Chen teaches a wireless communication device comprising:

at least one MSM processor, in fig. 3, processor 112.

at least one RAM accessed by the processor, in fig. 3, memory 124 and the last three lines of par. 5.

at least one flash memory accessed by the processor, the processor writing data to the flash memory by accessing a flash driver instantiated in the RAM, in the last sentence of par. 4.

Chan does not specifically disclose that the processor is an MSM processor. However, in light of Applicant's background, which defines an MSM processor as a processor in a wireless communications device that accesses RAM to store data and a flash memory to store software, the processor of Chan therefore meets Applicants definition of an MSM processor.

12. With respect to claim 12, Chen teaches the wireless communication device of claim 11, wherein the flash memory includes a code bank and a data bank, in fig. 3,

where the code bank stores the System program 128 and Flash memory driver 132, while the code bank stores the Data file 136.

13. With respect to claim 13, Chen teaches the wireless communication device of claim 11, wherein the processor accesses a flash driver in the RAM to write program data to the code bank, in the last sentence of par. 4.

14. With respect to claim 15, Chen teaches the wireless communication device of claim 6, wherein one and only one copy of the flash driver exists in the wireless communication device, and that in the RAM, in the last sentence of par. 4.

15. With respect to claim 16, Chen teaches the device of claim 12, wherein the flash driver is prevented from accessing code in the code bank at least when performing operations on the flash memory, in par. 16, where it is disclosed that the needed parts of the system program are loaded into volatile memory to prevent access to the flash memory device.

16. Claims 1-5 and 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen, US PG Pub 2002/0169923 and See et al., US Patent 6,401,160.

17. With respect to claim 1, See et al. teach a method for storing data in a flash memory device having at least a code bank and a data bank, in fig.1, Flash memory 100, where the data bank is Data storage 114 and the code bank is Code storage 118; comprising:

writing data to the data bank when sufficient space is expected to exist in the data bank, in fig. 2 and col. 3, lines 47-64; otherwise

writing data to the code bank, in fig. 8D. The last data block is identified using the process of fig. 8B. Data will be stored in the data block until the last block is reached. Then the data portion is expanded, or in other words, the code block closest to the boundary is written to (fig. 8D, step 816).

See et al. fails to explicitly teach where the flash driver is located, whether in the RAM 130 or code storage 118 in fig. 1. Chen teaches storing the flash driver both in the flash memory and in an external storage device, in fig. 4, Flash memory driver 132 stored in flash memory 126, and Flash memory driver 132 stored in memory 124.

Chen teaches writing data to the flash memory under control of a flash driver in the code bank, in par. 15, lines 8-13.

Chen also teaches writing data to the flash memory under control of a flash driver in a storage device external to the flash memory device, in par. 16, lines 17-20.

18. With respect to claim 2, See et al. teach the method of claim 1, wherein the flash memory device is accessed by a wireless communication device processor, in col. 1, lines 14-17, where it is disclosed that the device can be a cellular telephone, and in col. 3, lines 38-42, where it is disclosed that a processor can be used.

19. With respect to claim 3, Chen teaches the method of claim 2, wherein the storage device is a RAM accessed by the processor in the last four lines of par. 15.

20. With respect to claim 4, Chen teaches the method of claim 3, wherein copies of the flash driver are in both the RAM and the code bank, in fig. 4, Flash memory driver 132 stored in flash memory 126, and Flash memory driver 132 stored in memory 124.

21. With respect to claim 5, Chen teaches the method of claim 1, further comprising preventing the flash driver from accessing code in the code bank when performing operations on the flash memory device, in par. 16, where it is disclosed that the needed parts of the system program are loaded into volatile memory to prevent access to the flash memory device.

22. With respect to claim 17, See et al. teach a system for storing data in a flash memory device having at least a code bank and a data bank, comprising:

means for writing data to the data bank when sufficient space is expected to exist in the data bank, in fig. 2 and col. 3, lines 47-64; and

means for otherwise writing data to the code bank, in fig. 8D. The last data block is identified using the process of fig. 8B. Data will be stored in the data block until the last block is reached. Then the data portion is expanded, or in other words, the code block closest to the boundary is written to (fig. 8D, step 816).

See et al. fails to explicitly teach where the flash driver is located, whether in the RAM 130 or code storage 118 in fig. 1. Chen teaches storing the flash driver both in the flash memory and in an external storage device, in fig. 4, Flash memory driver 132 stored in flash memory 126, and Flash memory driver 132 stored in memory 124.

Chen teaches writing data to the flash memory under control of a flash driver in the code bank, in par. 15, lines 8-13.

Chen also teaches writing data to the flash memory under control of a flash driver in a storage device external to the flash memory device, in par. 16, lines 17-20.

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23. With respect to claim 18, See et al. teaches the system of claim 17, wherein the flash memory device is accessed by a wireless communications device processor, in col. 1, lines 14-17, where it is disclosed that the device can be a cellular telephone, and in col. 3, lines 38-42, where it is disclosed that a processor can be used.

24. With respect to claim 19, Chen teaches the system of claim 18, wherein the storage device external to the flash memory device is a RAM accessed by the processor, in the last four lines of par. 15.

25. With respect to claim 20, Chen teaches the system of claim 17, wherein copies of the flash driver are in both the RAM and the code bank, in fig. 4, Flash memory driver 132 stored in flash memory 126, and Flash memory driver 132 stored in memory 124.

26. With respect to claim 21, Chen teaches the system of claim 17, comprising means for preventing the flash driver from accessing code in the code bank when performing operations on the flash memory device, in par. 16, where it is disclosed that the needed parts of the system program are loaded into volatile memory to prevent access to the flash memory device.

27. With respect to claim 22, See et al. teaches a computer-readable medium embodying codes for implementing a method for storing data in a flash memory device having at least a code bank and a data bank, in fig. 1, Flash memory 100, where the data bank is Data storage 114 and the code bank is Code storage 118; the method comprising:

writing data to the data bank when sufficient space is expected to exist in the data bank, in fig. 2 and col. 3, lines 47-64; otherwise

writing data to the code bank, in fig. 8D. The last data block is identified using the process of fig. 8B. Data will be stored in the data block until the last block is reached. Then the data portion is expanded, or in other words, the code block closest to the boundary is written to (fig. 8D, step 816).

See et al. fails to explicitly teach where the flash driver is located, whether in the RAM 130 or code storage 118 in fig. 1. Chen teaches storing the flash driver both in the flash memory and in an external storage device, in fig. 4, Flash memory driver 132 stored in flash memory 126, and Flash memory driver 132 stored in memory 124.

Chen teaches writing data to the flash memory under control of a flash driver in the code bank, in par. 15, lines 8-13.

Chen also teaches writing data to the flash memory under control of a flash driver in a storage device external to the flash memory device, in par. 16, lines 17-20.

28. With respect to claim 23, Chen teaches the medium of claim 22, the method further comprising preventing the flash driver from accessing code in the code bank when performing operations on the flash memory device, in par. 16, where it is disclosed that the needed parts of the system program are loaded into volatile memory to prevent access to the flash memory device.

29. It would have been obvious to one of ordinary skill in the art having the teachings of See et al. and Chen before him at the time the invention was made, to modify the flash memory system of See et al. with the flash memory system of Chen, because in the case where data is being written to the code bank, it is preferential for it to be under control of a flash driver in a storage device external to the flash memory device, to

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ensure accuracy of the written data by avoiding miswriting data due to the program being executed from the flash memory, as taught by Chen in par. 16. In addition, it would be obvious to write data to the data bank under control of a flash driver in the code bank in order to reduce the total memory capacity of the computer, as taught by Chan in the last two lines of par. 16.

Conclusion

30. The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111(c) to consider these references fully when responding to this action. The documents cited therein teach similar flash memory devices.

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Dare whose telephone number is (571)272-4069. The examiner can normally be reached on Mon-Fri 9:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on (571)272-4182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Ryan A. Dare". The signature is fluid and cursive, with the first name "Ryan" and last name "Dare" clearly distinguishable.

Ryan A. Dare
November 23, 2005

A handwritten signature in black ink, appearing to read "Matthew Kim". The signature is stylized and cursive, with the first name "Matthew" and last name "Kim" clearly distinguishable.

MATTHEW KIM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100